

FIG. 1





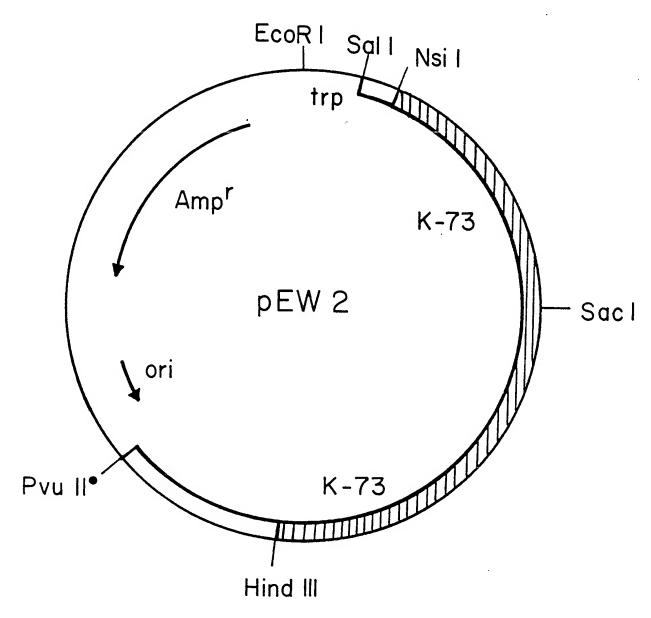
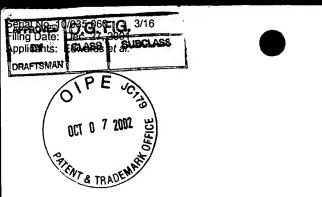


FIG. 2



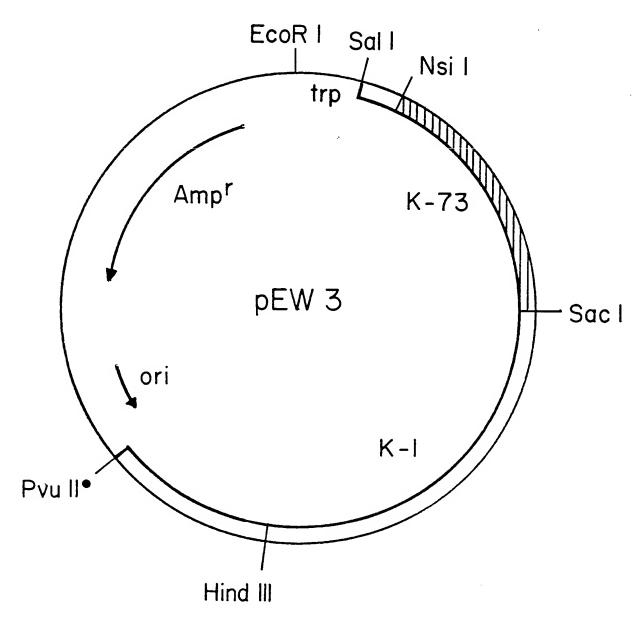


FIG. 3

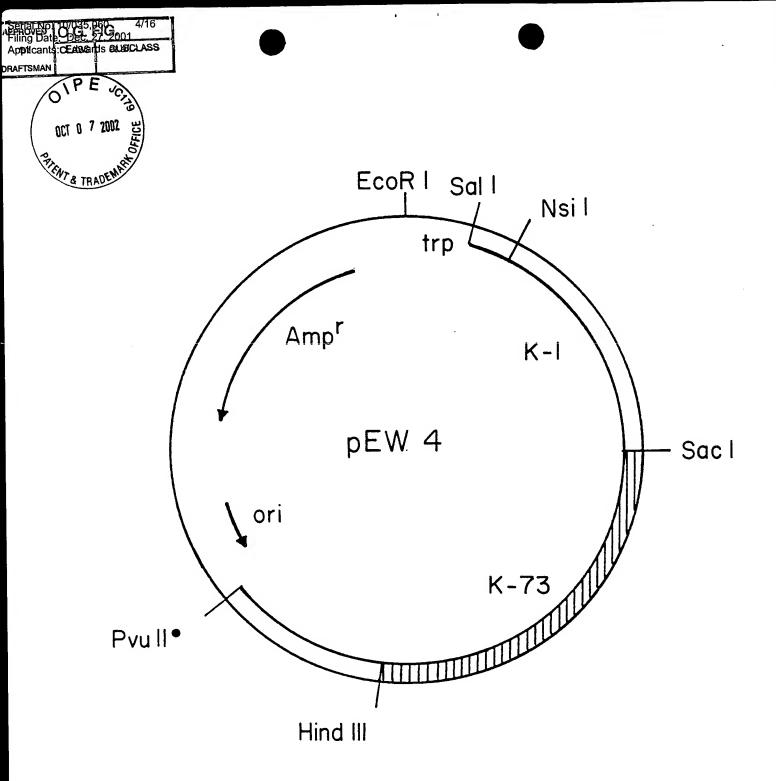
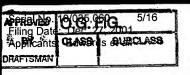


FIG. 4

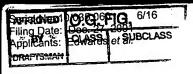




ATG GATAACAATC 400 (start HD-73) CGAACATCAA TGAATGCATT CCTTATAATT GTTTAAGTAA CCCTGAAGTA GAAGTATTAG GTGGAGAAAG AATAGAAACT GGTTACACCC CAATCGATAT 500 TTCCTTGTCG CTAACGCAAT TTCTTTTGAG TGAATTTGTT CCCGGTGCTG GATTTGTGTT AGGACTAGTT GATATAATAT GGGGAATTTT TGGTCCCTCT 600 CAATGGGACG CATTTCTTGT ACAAATTGAA CAGTTAATTA ACCAAAGAAT AGAAGAATTC GCTAGGAACC AAGCCATTTC TAGATTAGAA GGACTAAGCA 700 ATCTTTATCA AATTTACGCA GAATCTTTTA GAGAGTGGGA AGCAGATCCT CAGTGCCCTT ACAACCGCTA TTCCTCTTTT TGCAGTTCAA AATTATCAAG TTCCTCTTTT ATCAGTATAT GTTCAAGCTG CAAATTTACA TTTATCAGTT TTGAGAGATG TTTCAGTGTT TGGACAAAGG TGGGGATTTG ATGCCGCGAC TATCAATAGT CGTTATAATG ATTTAACTAG GCTTATTGGC AACTATACAG 1000 ATTATGCTGT ACGCTGGTAC AATACGGGAT TAGAACGTGT ATGGGGACCG GATTCTAGAG ATTGGGTAAG GTATAATCAA TTTAGAAGAG AATTAACACT 1100 AACTGTATTA GATATCGTTG CTCTGTTCCC GAATTATGAT AGTAGAAGAT ATCCAATTCG AACAGTTTCC CAATTAACAA GAGAAATTTA TACAAACCCA 1200 AAGAAGTATT AGGAGTCCAC ATTTGATGGA TATACTTAAC AGTATAACCA 1300 TCTATACGGA TGCTCATAGG GGTTATTATT ATTGGTCAGG GCATCAAATA ATGGCTTCTC CTGTAGGGTT TTCGGGGCCA GAATTCACTT TTCCGCTATA 1400 TGGAACTATG GGAAATGCAG CTCCACAACA ACGTATTGTT GCTCAACTAG GTCAGGGCGT GTATAGAACA TTATCGTCCA CTTTATATAG AAGACCTTTT 1500 AATATAGGGA TAAATAATCA ACAACTATCT GTTCTTGACG GGACAGAATT TGCTTATGGA ACCTCCTCAA ATTTGCCATC CGCTGTATAC AGAAAAAGCG 1600 GAACGGTAGA TTCGCTGGAT GAAATACCGC CACAGAATAA CAACGTGCCA CCTAGGCAAG GATTTAGTCA TCGATTAAGC CATGTTTCAA TGTTTCGTTC 1700 AGGCTTTAGT AATAGTAGTG TAAGTATAAT AAGAGCT (end hd-73) CCAACGT TTTCTTGGCA GCATCGCAGT 1900 (start HD-1) GCTGAATTTA ATAATATAAT TCCTTCATCA CAAATTACAC AAATACCTTT AACAAAATCT ACTAATCTTG GCTCTGGAAC TTCTGTCGTT AAAGGACCAG 2000 GATTTACAGG AGGAGATATT CTTCGAAGAA CTTCACCTGG CCAGATTTCA ACCTTAAGAG TAAATATTAC TGCACCATTA TCACAAAGAT ATCGGGTAAG 2100 AATTCGCTAC GCTTCTACTA CAAATTTACA ATTCCATACA TCAATTGACG GAAGACCTAT TAATCAGGGT AATTTTTCAG CAACTATGAG TAGTGGGAGT 2200 AATTTACAGT CCGGAAGCTT TAGGACTGTA GGTTTTACTA CTCCGTTTAA CTTTTCAAAT GGATCAAGTG TATTTACGTT AAGTGCTCAT GTCTTCAATT 2300 CAGGCAATGA AGTTTATATA GATCGAATTG AATTTGTTCC GGCAGAAGTA ACCTTTGAGG CAGAATATGA TTTAGAAAGA GCACAAAAGG CGGTGAATGA GCTGTTTACT TCTTCCAATC AAATCGGGTT AAAAACAGAT GTGACGGATT ATCATATTGA TCAAGTATCC AATTTAGTTG AGTGTTTATC AGATGAATTI 2500 TETCTGGATG AAAAACAAGA ATTGTCCGAG AAAGTCAAAC ATGCGAAGCG ACTTAGTGAT GAGCGGAATT TACTTCAAGA TCCAAACTTC AGAGGGATCA 2600 ATAGACAACT AGACCGTGGC TGGAGAGGAA GTACGGATAT TACCATCCAA GGAGGCGATG ACGTATTCAA AGAGAATTAC GTTACGCTAT TGGGTACCTT 2700 TGATGAGTGC TATCCAACGT ATTTATATCA AAAAATAGAT GAGTCGAAAT

FIG. 5A

(SEQ. ID. NO. 1)





TAAAAGCCTA TACCCGTTAT CAATTAAGAG GGTATATCGA AGATAGTCAA 2800 GACTTAGAAA TCTATTTAAT TCGCTACAAT GCAAAACATG AAACAGTAAA TGTGCCAGGT ACGGGTTCCT TATGGCCGCT TTCAGCCCAA AGTCCAATCG 2900 GAAAGTETGG AGAGCCGAAT CGATGCGCGC CACACCTTGA ATGGAATCCT GACTTAGATT GTTCGTGTAG GGATGGAGAA AAGTGTGCCC ATCATTCGCA 3000 TCATTTCTCC TTAGACATTG ATGTAGGATG TACAGACTTA AATGAGGACC TAGGTETATG GETGATCTTT AAGATTAAGA CGCAAGATGG GCACGCAAGA 3100 CTAGGGAATC TAGAGTTTCT CGAAGAGAAA CCATTAGTAG GAGAAGCGCT AGCTCGTGTG AAAAGAGCGG AGAAAAAATG GAGAGACAAA CGTGAAAAAT 3200 TGGAATGGGA AACAAATATC GTTTATAAAG AGGCAAAAGA ATCTGTAGAT GCTTTATTTG TAAACTCTCA ATATGATCAA TTACAAGCGG ATACGAATAT 3300 TGCCATGATT CATGCGGCAG ATAAACGTGT TCATAGCATT CGAGAAGCTT ATCTGCCTGA GCTGTCTGTG ATTCCGGGTG TCAATGCGGC TATTTTTGAA 3400 GAATTAGAAG GGCGTATTTT CACTGCATTC TCCCTATATG ATGCGAGAAA TETCATTAAA AATGGTGATT TTAATAATGG CTTATCCTGC TGGAACGTGA 3500 AAGGECATGT AGATGTAGAA GAACAAAACA ACCAACGTTC GGTCCTTGTT CTTCCGGAAT GGGAAGCAGA AGTGTCACAA GAAGTTCGTG TCTGTCCGGG 3600 TCGTGGCTAT ATCCTTCGTG TCACAGCGTA CAAGGAGGGA TATGGAGAAG GTTGCGTAAC CATTCATGAG ATCGAGAACA ATACAGACGA ACTGAAGTTT 3700 AGCAACTGCG TAGAAGAGGA AATCTATCCA AATAACACGG TAACGTGTAA TGATTATACT GTAAATCAAG AAGAATACGG AGGTGCGTAC ACTTCTCGTA 3800 ATCGAGGATA TAACGAAGCT CCTTCCGTAC CAGCTGATTA TGCGTCAGTC TATGAAGAAA AATCGTATAC AGATGGACGA AGAGAGAATC CTTGTGAATT 3900 TAACAGAGGG TATAGGGATT ACACGCCACT ACCAGTTGGT TATGTGACAA AAGAATTAGA ATACTTCCCA GAAACCGATA AGGTATGGAT TGAGATTGGA 4000 GAAACGGAAG GAACATTTAT CGTGGACAGC GTGGAATTAC TCCTTATGGA GGAA (end HD-1)

FIG. 5B

periamo 1 /byady such as Filing Date: Dec. 27, 2001 Handal Edwards et al.

OT 0 7 2002 DEFINITE OF TRADEWICH TO

NNPNINECIPYNCLSNPEVEVLGGERIE PIDISLSLTQFLLSEFVP GAGF IWGIFGPSQWDAFLVQIEQLINQRI ARNQAISRLEGLSNLYQIYAESFREWE TNPALREEMRIQFNDMNSALT TAIPLF Q N Y Q V P L L S V Y V Q A A N L H L S V L R D V S VF TRLIGNYTDY GFDAATINS RYNDL G L E R V W G P D S R D W V R Y N Q F R R E L T V A L F P N Y D S R R Y P I R T V S Q L T R E Ι LENFDGSFRGSAQGIERSIRSPHLMD TDAHRGYYYWSGHQIMASPVG ΙY LYGTMGNAAPQQRIVAQLGQGV TLYRRPFNIGINNQQLSVLDGTEF S S N L P S A V Y R K S G T V D S L D E I P P Q N N N P P R Q G F S H R L S H V S M F R S G F S N S S V S I F S W Q H R S A E F N N I I P S S Q I T Q I P L T K S TGGDILRRT SPGQI GSGTSVVKGPGF LRVNITAPLSQRYRVRIRYASTTNLQFHT GRPINQGNFSATMSSGSNLQSGSFR TLSAHVFNSGNEV Y F N F S N G S S V F V P A E V T F E A E Y D L E R A Q K A V N E L RIEF SNQIGLKTDVTDYHIDQVSNLVECL S D LDEKQELSEKVKHAKRLSDERNLLQDPNF DITIQGGDDVFKE GINRQLDRGWRGS ${f T}$ TLLGTFDECYPTYLYQKIDESKLKAYT VNV LRGYIEDSQDLEIYLIRYNAKHE T LWPLSAQSPIGKCGEPNRCAPHLEW CRDGEKCAHHSHHFSLDID \mathbf{T} V G C IFKIKTQDGHARLGNL LGVWV LVGEALARVKRAEKKWRDKREKLEW QYDQLQAD TNIAM VDALFVNS YKEAKES IREAYLPELSVIPGVNAAI AADKRVHS SLYDARNVIKNGDFNNGL LEGRIFT A F NVKGHVDVEEQNNQRSVLVLPEWE ΑE V S V R V C P G R G Y I L R V T A Y K E G Y G E С V IHE G YPNN Т V Т C N D Y ENNTDELKFSNCVEE Ε Ι O E E Y G G A Y T S R N R G Y N E A P S V P A DYAS EKSYTDGRRENPCEFNRGYRDYT PLPV KELEYFPETDKVWIEIGETEGTFIVDSV ELLLMEE

FIG. 6

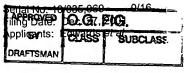
(SEQ. ID. NO. 2)



ATEG ATAACAATCC GAACATCAAT (start HD-1) GAATECATTC CTTATAATTG TTTAAGTAAC CCTGAAGTAG AAGTATTAGG 600 TGGAGAAAGA ATAGAAACTG GTTACACCCC AATCGATATT TCCTTGTCGC TAACGCAATT TCTTTTGAGT GAATTTGTTC CCGGTGCTGG ATTTGTGTTA 700 GGACTAGTTG ATATAATATG GGGAATTTTT GGTCCCTCTC AATGGGACGC ATTTCCTGTA CAAATTGAAC AGTTAATTAA CCAAAGAATA GAAGAATTCG 800 CTAGGAACCA AGCCATTTCT AGATTAGAAG GACTAAGCAA TCTTTATCAA ATTTACGCAG AATCTTTTAG AGAGTGGGAA GCAGATCCTA CTAATCCAGC 900 ATTAAGAGAA GAGATGCGTA TTCAATTCAA TGACATGAAC AGTGCCCTTA CAACCGCTAT TCCTCTTTTG GCAGTTCAAA ATTATCAAGT TCCTCTTTTA 1000 TCAGTATATG TTCAAGCTGC AAATTTACAT TTATCAGTTT TGAGAGATGT TTCAGTGTTT GGACAAAGGT GGGGATTTGA TGCCGCGACT ATCAATAGTC GTTATAATGA TTTAACTAGG CTTATTGGCA ACTATACAGA TTATGCTGTG CGCTGGTACA ATACGGGATT AGAGCGTGTA TGGGGACCGG ATTCTAGAGA 1200 TTGGGTAAGG TATAATCAAT TTAGAAGAGA GCTAACACTT ACTGTATTAG ATATOGTTGO TOTATTOTOA AATTATGATA GTOGAAGGTA TOCAATTOGA 1300 ACAGTTTCCC AATTAACAAG AGAAATTTAT ACGAACCCAG TATTAGAAAA TTTTGATGGT AGTTTTCGTG GAATGGCTCA GAGAATAGAA CAGAATATTA 1400 GGCAACCACA TCTTATGGAT ATCCTTAATA GTATAACCAT TTATACTGAT GTGCATAGAG GCTTTAATTA TTGGTCAGGG CATCAAATAA CAGCTTCTCC TGTAGGGTTT TCAGGACCAG AATTCGCATT CCCTTTATTT GGGAATGCGG GGAATGCAGC TCCACCCGTA CTTGTCTCAT TAACTGGTTT GGGGATTTTT 1600 AGAACATTAT CTTCACCTTT ATATAGAAGA ATTATACTTG GTTCAGGCCC AAATAATCAG GAACTGTTTG TCCTTGATGG AACGGAGTTT TCTTTTGCCT 1700 CCCTAACGAC CAACTTGCCT TCCACTATAT ATAGACAAAG GGGTACAGTC GATTCACTAG ATGTAATACC GCCACAGGAT AATAGTGTAC CACCTCGTGC 1800 GGGATTTAGC CATCGATTGA GTCATGTTAC AATGCTGAGC CAAGCAGCTG (stop HD-1) GAGCAGTTTA CACCTTGAGA GCTCAACGT (start HD-73) CCT ATGTTCTCTT GGATACATCG TAGTGCTGAA TITAATAATA TAATTGCATC GGATAGTATT ACTCAAATCC CTGCAGTGAA GGGAAACTTT CTTTTTAATG GTTCTGTAAT TTCAGGACCA GGATTTACTG GTGGGGACTT AGTTAGATTA AATAGTAGTG 1900 GAAATAACAT TCAGAATAGA GGGTATATTG AAGTTCCAAT TCACTTCCCA TCGACATCTA CCAGATATCG AGTTCGTGTA CGGTATGCTT CTGTAACCCC 2000 GATTCACCTC AACGTTAATT GGGGTAATTC ATCCATTTTT TCCAATACAG TACCAGCTAC AGCTACGTCA TTAGATAATC TACAATCAAG TGATTTTGGT 2100 TATTTTGAAA GTGCCAATGC TTTTACATCT TCATTAGGTA ATATAGTAGG TGTTAGAAAT TTTAGTGGGA CTGCAGGAGT GATAATAGAC AGATTTGAAT 2200 TTATTCCAGT TACTGCAACA CTCGAGGCTG AATATAATCT GGAAAGAGCG

FIG. 7A

(SEO. ID. NO. 4)





CAGAAGGCGG TGAATGCGCT GTTTACGTCT ACAAACCAAC TAGGGCTAAA 2300 AACAAATGTA ACGGATTATC ATATTGATCA AGTGTCCAAT TTAGTTACGT ATTTATCGGA TGAATTTTGT CTGGATGAAA AGCGAGAATT GTCCGAGAAA 2400 GTCAAACATG CGAAGCGACT CAGTGATGAA CGCAATTTAC TCCAAGATTC AAATTTCAAA GACATTAATA GGCAACCAGA ACGTGGGTGG GGCGGAAGTA 2500 CAGGGATTAC CATCCAAGGA GGGGATGACG TATTTAAAGA AAATTACGTC ACACTATCAG GTACCTTTGA TGAGTGCTAT CCAACATATT TGTATCAAAA 2600 AATCGATGAA TCAAAATTAA AAGCCTTTAC CCGTTATCAA TTAAGAGGGT ATATCGAAGA TAGTCAAGAC TTAGAAATCT ATTTAATTCG CTACAATGCA 2700 AAACATGAAA CAGTAAATGT GCCAGGTACG GGTTCCTTAT GGCCGCTTTC AGCCCAAAGT CCAATCGGAA AGTGTGGAGA GCCGAATCGA TGCGCGCCAC 2800 ACCTTGAATG GAATCCTGAC TTAGATTGTT CGTGTAGGGA TGGAGAAAAG TGTGCCCATC ATTCGCATCA TTTCTCCTTA GACATTGATG TAGGATGTAC AGACTTAAAT GAGGACCTAG GTGTATGGGT GATCTTTAAG ATTAAGACGC AAGATGGCA CGCAAGACTA GGGAATCTAG AGTTTCTCGA AGAGAAACCA 3000 TTAGTAGGAG AAGCGCTAGC TCGTGTGAAA AGAGCGGAGA AAAAATGGAG AGACAAACGT GAAAAATTGG AATGGGAAAC AAATATCGTT TATAAAGAGG 3100 CAAAAGAATC TGTAGATGCT TTATTTGTAA ACTCTCAATA TGATCAATTA CAAGCGGATA CGAATATTGC CATGATTCAT GCGGCAGATA AACGTGTTCA 3200 TAGCATTOGA GAAGOTTATO TOCCTGAGOT GTOTGTGATT COGGGTGTCA ATGCGGCTAT TTTTGAAGAA TTAGAAGGGC GTATTTTCAC TGCATTCTCC 3300 CTATATGATG CGAGAAATGT CATTAAAAAT GGTGATTTTA ATAATGGCTT ATCCTGCTGG AACGTGAAAG GGCATGTAGA TGTAGAAGAA CAAAACAACC 3400 AACGTTCGGT CCTTGTTGTT CCGGAATGGG AAGCAGAAGT GTCACAAGAA GTTCGTGTCT GTCCGGGTCG TGGCTATATC CTTCGTGTCA CAGCGTACAA 3500 GGAGGGATAT GGAGAAGGTT GCGTAACCAT TCATGAGATC GAGAACAATA CAGACGAACT GAAGTTTAGC AACTGCGTAG AAGAGGAAAT CTATCCAAAT 3600 AACACGGTAA CGTGTAATGA TTATACTGTA AATCAAGAAG AATACGGAGG TGCGTACACT TCTCGTAATC GAGGATATAA CGAAGCTCCT TCCGTACCAG 3700 CTGATTATGC GTCAGTCTAT GAAGAAAAAT CGTATACAGA TGGACGAAGA GAGAATCCTT GTGAATTTAA CAGAGGGTAT AGGGATTACA CGCCACTACC 3800 AGTTEGTTAT GTGACAAAAG AATTAGAATA CTTCCCAGAA ACCGATAAGG TATGGATTGA GATTGGAGAA ACGGAAGGAA CATTTATCGT GGACAGCGTG 3900 GAATTACTCC TTATGGAGGA A (end HD-73)

N N P N I N E C I P Y N C L S N P E V E V L G G E R I E T P I D I S L S L T Q F L L S E F V P G A G F VLGL Y WGIFGPSQWDAFPVQIEQLINQRIEE V D FARNQAISRLEGLSNLYQIYAESFRE WE NPALREEMRIQFNDMNSALTTAI YOVPLLSVYVQAANLHLSVLRDVS RWGFDAATINSRYNDLTRLIGNYTDYA RVWGPDSRDWVRYNQFRREL YNTGLE V A L F S N Y D S R R Y P I R T V S Q L T R E I V L E N F D G S F R G M A Q R I E Q N I R Q P H L M D I Y T D V H R G F N Y W S G H Q I T A S P V G FAFPLFGNAGNAAPPVLVSLTGLGIF ILGSGPNNQELFVLDGT Ε SPLYRRI $\texttt{T} \; \texttt{T} \; \texttt{N} \; \texttt{L} \; \texttt{P} \; \texttt{S} \; \texttt{T} \; \texttt{I} \; \texttt{Y} \; \texttt{R} \; \texttt{Q} \; \texttt{R} \; \texttt{G} \; \texttt{T} \; \texttt{V} \; \texttt{D} \; \texttt{S} \; \texttt{L} \; \texttt{D} \; \texttt{V} \; \texttt{I} \; \texttt{P} \; \texttt{P} \; \texttt{Q} \; \texttt{D} \; \texttt{N}$ SHRLSHVTMLSQAAGAVYTL RAQ F S W I H R S A E F N N I I A S D S I T Q I P A V LFNGSVISGPGFTGGDLVRLNSSGNNI STSTRYRVRVRYASVT NRGYIEVPIHFP SLDNLQS PATAT HLNVNWGNS S I F SNTV VGVRNFSGTAGVI SSLGNI GYFESANAF Т IDRFEFIPVTATLEAEYNLERAQKAVNAL NOLGLKTNVTDYHIDQVSNLVTYLSDE DEKRELSEKVKHAKRLSDERNLLQDSN K D I N R Q P E R G W G G S T G I T I Q G G D D V F ΚE V T L S G T F D E C Y P T Y L Y Q K I D E S K L K A F YQLRGYIEDSQDLEIYLIRYNAKHETVNV TGSLWPLSAQSPIGKCGEPNRCAPHLE PDLDCSCRDGEKCAHHSHHFSLDIDVGC DLGVWVIFKIKTQDGHARLGNLEFLE PLVGEALARVKRAEKKWRDKREKL YKEAKESVDALFVNSQYDQLQADTNIAM HAADKRVHSIREAYLPELSVIPGVNAA AFSLYDARNVIKN G D F T FLEGRIF EQNNQRSVL V V Ρ Ε WNVKGHV D VΕ EVRVCPGRGYILRVTAYKE GYGE V SNCVEEEIYPNNT VT IENNTDELKF V N Q E E Y G G A Y T S R N R G Y N E A P S V PΑ Y YEEKSYTDGRRENPCEFNRGYRDYT PLYVTKELEYFPETDKVWIEIGETEGTFIVD SVELLLMEE

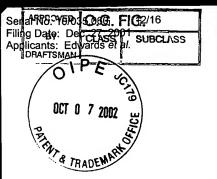
(SEQ. ID. NO. 3)



ATG GATAACAATC 400 (start HD-73) CGAACATCAA TGAATGCATT CCTTATAATT GTTTAAGTAA CCCTGAAGTA GAAGTATTAG GTGGAGAAAG AATAGAAACT GGTTACACCC CAATCGATAT 500 TTCCTTGTCG CTAACGCAAT TTCTTTTGAG TGAATTTGTT CCCGGTGCTG GATTTGTGTT AGGACTAGTT GATATAATAT GGGGAATTTT TGGTCCCTCT CAATGGGACG CATTTCTTGT ACAAATTGAA CAGTTAATTA ACCAAAGAAT AGAAGAATTC GCTAGGAACC AAGCCATTTC TAGATTAGAA GGACTAAGCA 700 ATCTTTATCA AATTTACGCA GAATCTTTTA GAGAGTGGGA AGCAGATCCT CAGTGCCCTT ACAACCGCTA TTCCTCTTTT TGCAGTTCAA AATTATCAAG TTCCTCTTTT ATCAGTATAT GTTCAAGCTG CAAATTTACA TTTATCAGTT TTGAGAGATG TTTCAGTGTT TGGACAAAGG TGGGGATTTG ATGCCGCGAC TATCAATAGT CGTTATAATG ATTTAACTAG GCTTATTGGC AACTATACAG 1000 ATTATECTET ACECTEGTAC AATACEGEAT TAGAACETET ATEGEGACCE GATTCTAGAG ATTGGGTAAG GTATAATCAA TTTAGAAGAG AATTAACACT 1100 AACTGTATTA GATATCGTTG CTCTGTTCCC GAATTATGAT AGTAGAAGAT ATCCAATTCG AACAGTTTCC CAATTAACAA GAGAAATTTA TACAAACCCA 1200 AAGAAGTATT AGGAGTCCAC ATTTGATGGA TATACTTAAC AGTATAACCA 1300 TCTATACGGA TGCTCATAGG GGTTATTATT ATTGGTCAGG GCATCAAATA ATGGCTTCTC CTGTAGGGTT TTCGGGGCCA GAATTCACTT TTCCGCTATA 1400 TGGAACTATG GGAAATGCAG CTCCACAACA ACGTATTGTT GCTCAACTAG GTCAGGGCGT GTATAGAACA TTATCGTCCA CTTTATATAG AAGACCTTTT 1500 AATATAGGGA TAAATAATCA ACAACTATCT GTTCTTGACG GGACAGAATT TGCTTATGGA ACCTCCTCAA ATTTGCCATC CGCTGTATAC AGAAAAAGCG 1600 GAACGGTAGA TTCGCTGGAT GAAATACCGC CACAGAATAA CAACGTGCCA CCTAGGCAAG GATTTAGTCA TCGATTAAGC CATGTTTCAA TGTTTCGTTC 1700 AGGCTTTAGT AATAGTAGTG TAAGTATAAT AAGAGCT (end hd-73) (start HD-1) CCAACGT TTTCTTGGCA GCATCGCAGT 1900 GCTGAATTTA ATAATATAAT TCCTTCATCA CAAATTACAC AAATACCTTT AACAAAATCT ACTAATCTTG GCTCTGGAAC TTCTGTCGTT AAAGGACCAG 2000 GATTTACAGG AGGAGATATT CTTCGAAGAA CTTCACCTGG CCAGATTTCA ACCTTAAGAG TAAATATTAC TGCACCATTA TCACAAAGAT ATCGGGTAAG 2100 AATTCGCTAC GCTTCTACTA CAAATTTACA ATTCCATACA TCAATTGACG GAAGACCTAT TAATCAGGGT AATTTTTCAG CAACTATGAG TAGTGGGAGT 2200 AATTTACAGT CCGGAAGCTT TAGGACTGTA GGTTTTACTA CTCCGTTTAA CTTTTCAAAT GGATCAAGTG TATTTACGTT AAGTGCTCAT GTCTTCAATT 2300 CAGGCAATGA AGTTTATATA GATCGAATTG AATTTGTTCC GGCAGAAGTA ACCTTTGAGG CAGAATATGA TTTAGAAAGA GCACAAAAGG CGGTGAATGA 2400 GCTGTTTACT TCTTCCAATC AAATCGGGTT AAAAACAGAT GTGACGGATT ATCATATTGA TCAAGTATCC AATTTAGTTG AGTGTTTATC AGATGAATTT 2500 TGTCTGGATG AAAAACAAGA ATTGTCCGAG AAAGTCAAAC ATGCGAAGCG ACTTAGTGAT GAGCGGAATT TACTTCAAGA TCCAAACTTC AGAGGGATCA 2600 ATAGACAACT AGACCETEGC TGGAGAGGAA GTACGGATAT TACCATCCAA

FIG. 9A

(SEQ. ID. NO. 6)



GGAGGCGATG ACGTATTCAA AGAGAATTAC GTTACGCTAT TGGGTACCTT 2700 TGATGAGTGC TATCCAACGT ATTTATATCA AAAAATAGAT GAGTCGAAAT TAAAAGCCTA TACCCGTTAT CAATTAAGAG GGTATATCGA AGATAGTCAA 2800 GACTTAGAAA TCTATTTAAT TCGCTACAAT GCAAAACATG AAACAGTAAA TGTGCCAGGT ACGGGTTCCT TATGGCCGCT TTCAGCCCAA AGTCCAATCG 2900 GAAAGTGTGG AGAGCCGAAT CGATGCGCGC CACACCTTGA ATGGAATCCT GACTTAGATT GTTCGTGTAG GGATGGAGAA AAGTGTGCCC ATCATTCGCA 3000 TCATTTCTCC TTAGACATTG ATGTAGGATG TACAGACTTA AATGAGGACC TAGGTETATG GGTGATCTTT AAGATTAAGA CGCAAGATGG GCACGCAAGA 3100 CTAGGGAATC TAGAGTTTCT CGAAGAGAAA CCATTAGTAG GAGAAGCGCT AGCTCGTGTG AAAAGAGCGG AGAAAAAATG GAGAGACAAA CGTGAAAAAT TGGAATGGGA AACAAATATC GTTTATAAAG AGGCAAAAGA ATCTGTAGAT GCTTTATTTG TAAACTCTCA ATATGATCAA TTACAAGCGG ATACGAATAT 3300 TGCCATGATT CATGCGGCAG ATAAACGTGT TCATAGCATT CGAGAAGCTT ATCTGCCTGA GCTGTCTGTG ATTCCGGGTG TCAATGCGGC TATTTTTGAA 3400 GAATTAGAAG GGCGTATTTT CACTGCATTC TCCCTATATG ATGCGAGAAA TETCATTAAA AATGGTGATT TTAATAATGG CTTATCCTGC TGGAACGTGA 3500 AAGGGCATGT AGATGTAGAA GAACAAAACA ACCAACGTTC GGTCCTTGTT CTTCCGGAAT GGGAAGCAGA AGTGTCACAA GAAGTTCGTG TCTGTCCGGG 3600 TCGTGGCTAT ATCCTTCGTG TCACAGCGTA CAAGGAGGGA TATGGAGAAG GTTGCGTAAC CATTCATGAG ATCGAGAACA ATACAGACGA ACTGAAGTTT AGCAACTGCG TAGAAGAGGA AATCTATCCA AATAACACGG TAACGTGTAA TGATTATACT GTAAATCAAG AAGAATACGG AGGTGCGTAC ACTTCTCGTA 3800 ATCGAGGATA TAACGAAGCT CCTTCCGTAC CAGCTGATTA TGCGTCAGTC TATGAAGAAA AATCGTATAC AGATGGACGA AGAGAGAATC CTTGTGAATT 3900 TAACAGAGGG TATAGGGATT ACACGCCACT ACCAGTTGGT TATGTGACAA AAGAATTAGA ATACTTCCCA GAAACCGATA AGGTATGGAT TGAGATTGGA 4000 GAAACGGAAG GAACATTTAT CGTGGACAGC GTGGAATTAC TCCTTATGGA GGAA (end HD-1)

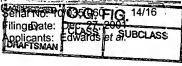
FIG. 9B

Serial No. 10/139,080 FIG. 3/16
Fing Dete: Declass Polsubclasis
Applicants a mards e al.

OCT 0 7 2002

D N N P N I N E C I P Y N C L S N P E V E V L G G E R I E TPID ISLSLTQFLLSE FVPGA GFVLGL FGPSQWDAFLVQ IEOLINOR WGI NOAI SRLEGLSNLYQI Y A E S FRE WE A R PALR Ε Ε M R IQFNDMNS ΑL T \mathbf{T} Ν SVL YQVPL LSVYVQAANLHL R D V S V INSRYNDL TRL I G N Y T D G DAA T SRDWVRYNQFRR E Y N G L Ε R V W G Р D L RT V S Y D SRRYPI Q L TRE Ι Y I VALF P N L D F D GSFRGSAQGIERS IRSPHLM D E N DAHRGYYYWSGHQIMASPVG F T POORIVAQLGQG V GNAA F Y G Т Μ G INNQQLSVLDGT Ε F S Τ LYRR P F ΝI TVDSLNEIPPQNNN VYRKSG SNLP S SA HVSMFRSGFSNSS R QE FSHRLS V S Ι Ι FNNI Ι Ρ S S Q ΙT Q Ι Ρ T SWQHRSAE F SGTSVVKGPGFT GGDILRRTSPGQ Ι G Ν STTNLQFH TAPLSORYRVRIRYA RVN S GSNLQ SGSFRT INOGNF S Α T M S AHVFNSGNE Y F Т F S N G S S V F Т L S V Ρ F Ν EAEYDLERAQKAVNE L F T F R Ε F VPAE V T YHIDQVS NLVEC L S D Ε GLKTD V D I AKRLSDE RNLL D Ρ DEKOELSE KVKH INROLDRGWR G S TDITIQ G GDD V F K Ε YLYQKIDE GTFDECYP T SKLK L L IYLIRYNAKH IEDSQDL Ε \mathbf{E} \mathbf{T} V N RGY IGKCGEPNR C A РН Ε PLSAOSP L W AHHSHHFSL D Ι D V G C T C S R D GEKC GNLE Ε E ΚI KTODGHARL F L I F V V K R A E K K W R D K R E K L E T Ε W V G EALA T I ΙH F V N S QYD QLQAD Ν Α Μ ΚE KES V D ΑL Y Α SVI Р G VN Ι F RΕ AYLP $\mathsf{E} \mathsf{L}$ A D KRVHS I G SLYDARNV Ι ΚN G D F Ν Ν G R Ι F Т A F EQNNQRSVL Ε S V L P V Ε VKGHVD V N ILRVTAYKE Ρ GRGY G Y G Ε G C V Т ΙH Y P N Ν Т V T K F S N CVEEE I T E L NN D AYTSRNRGYNEAP S V Ρ Α D Y S GG ΥT Ρ V DGRRENPCEFNRGYRD L Ρ T TKELEYFPETDKVWIEIGETEGTFIVD LLLMEE

(SEQ. ID. NO. 5)





(start HD-73) ATG GATAACAATC 400 CGAACATCAA TGAATGCATT CCTTATAATT GTTTAAGTAA CCCTGAAGTA GAAGTATTAG GTGGAGAAAG AATAGAAACT GGTTACACCC CAATCGATAT 500 TTCCTTGTCG CTAACGCAAT TTCTTTTGAG TGAATTTGTT CCCGGTGCTG GATTTGTGTT AGGACTAGTT GATATAATAT GGGGAATTTT TGGTCCCTCT 600 CAATGGGACG CATTTCTTGT ACAAATTGAA CAGTTAATTA ACCAAAGAAT AGAAGAATTC GCTAGGAACC AAGCCATTTC TAGATTAGAA GGACTAAGCA 700 ATCTTTATCA AATTTACGCA GAATCTTTTA GAGAGTGGGA AGCAGATCCT CAGTGCCCTT ACAACCGCTA TTCCTCTTTT TGCAGTTCAA AATTATCAAG TTCCTCTTTT ATCAGTATAT GTTCAAGCTG CAAATTTACA TTTATCAGTT 900 TTGAGAGATG TTTCAGTGTT TGGACAAAGG TGGGGATTTG ATGCCGCGAC TATCAATAGT CGTTATAATG ATTTAACTAG GCTTATTGGC AACTATACAG 1000 ATTATECTET ACGCTGGTAC AATACGGGAT TAGAACGTGT ATGGGGACCG GATTCTAGAG ATTGGGTAAG GTATAATCAA TTTAGAAGAG AATTAACACT 1100 AACTGTATTA GATATCGTTG CTCTGTTCCC GAATTATGAT AGTAGAAGAT ATCCAATTCG AACAGTTTCC CAATTAACAA GAGAAATTTA TACAAACCCA 1200 AAGAAGTATT AGGAGTCCAC ATTTGATGGA TATACTTAAC AGTATAACCA 1300 TCTATACGGA TGCTCATAGG GGTTATTATT ATTGGTCAGG GCATCAAATA ATGGCTTCTC CTGTAGGGTT TTCGGGGCCA GAATTCACTT TTCCGCTATA 1400 TGGAACTATG GGAAATGCAG CTCCACAACA ACGTATTGTT GCTCAACTAG GTCAGGGCGT GTATAGAACA TTATCGTCCA CTTTATATAG AAGACCTTTT 1500 AATATAGGGA TAAATAATCA ACAACTATCT GTTCTTGACG GGACAGAATT TGCTTATGGA ACCTCCTCAA ATTTGCCATC CGCTGTATAC AGAAAAAGCG 1600 GAACGGTAGA TTCGCTGGAT GAAATACCGC CACAGAATAA CAACGTGCCA CCTAGGCAAG GATTTAGTCA TCGATTAAGC CATGTTTCAA TGTTTCGTTC 1700 AGGCTTTAGT AATAGTAGTG TAAGTATAAT AAGAGCT (end hd-73) (start HD-1) CCAACGT TTTCTTGGCA GCATCGCAGT 1900 GCTGAATTTA ATAATATAAT TCCTTCATCA CAAATTACAC AAATACCTTT AACAAAATCT ACTAATCTTG GCTCTGGAAC TTCTGTCGTT AAAGGACCAG 2000 GATTTACAGG AGGAGATATT CTTCGAAGAA CTTCACCTGG CCAGATTTCA ACCTTAAGAG TAAATATTAC TGCACCATTA TCACAAAGAT ATCGGGTAAG 2100 AATTEGETAE GETTETAETA CAAATTTACA ATTECATACA TEAATTGAEG GAAGACCTAT TAATCAGGGT AATTTTTCAG CAACTATGAG TAGTGGGAGT 2200 AATTTACAGT CCGGAAGCTT TAGGACTGTA GGTTTTACTA CTCCGTTTAA CTTTTCAAAT GGATCAAGTG TATTTACGTT AAGTGCTCAT GTCTTCAATT 2300 CAGGCAATGA AGTTTATATA GATCGAATTG AATTTGTTCC GGCAGAAGTA ACCTTTGAGG CAGAATATGA TTTAGAAAGA GCACAAAAGG CGGTGAATGA 2400 GCTGTTTACT TCTTCCAATC AAATCGGGTT AAAAACAGAT GTGACGGATT ATCATATTGA TCAAGTATCC AATFTAGTTG AGTGTTTATC AGATGAATTT 2500 TGTCTGGATG AAAAACAAGA ATTGTCCGAG AAAGTCAAAC ATGCGAAGCG ACTTAGTGAT GAGCGGAATT TACTTCAAGA TCCAAACTTC AGAGGGATCA 2600 ATAGACAACT AGACCGTGGC TGGAGAGGAA GTACGGATAT TACCATCCAA GGAGGCGATG ACGTATTCAA AGAGAATTAC GTTACGCTAT TGGGTACCTT 2700 TGATGAGTGC TATCCAACGT ATTTATATCA AAAAATAGAT GAGTCGAAAT

FIG. 11A

(SEQ. ID. NO. 7)

Serial No. 10/038.080. FIG 5/16 Filing Daye: Declars 201 SUBCLASS Applicants with dwards et al.



TAAAAGCCTA TACCCGTTAT CAATTAAGAG GGTATATCGA AGATAGTCAA 2800 GACTTAGAAA TCTATTTAAT TCGCTACAAT GCAAAACATG AAACAGTAAA TGTGCCAGGT ACGGGTTCCT TATGGCCGCT TTCAGCCCAA AGTCCAATCG 2900 GAAAGTGTGG AGAGCCGAAT CGATGCGCGC CACACCTTGA ATGGAATCCT GACTTAGATT GTTCGTGTAG GGATGGAGAA AAGTGTGCCC ATCATTCGCA 3000 TCATTTCTCC TTAGACATTG ATGTAGGATG TACAGACTTA AATGAGGACC TAGGTGTATG GGTGATCTTT AAGATTAAGA CGCAAGATGG GCACGCAAGA 3100 CTAGGGAATC TAGAGTTTCT CGAAGAGAAA CCATTAGTAG GAGAAGCGCT AGCTCGTGTG AAAAGAGCGG AGAAAAAATG GAGAGACAAA CGTGAAAAAT 3200 TGGAATGGGA AACAAATATC GTTTATAAAG AGGCAAAAGA ATCTGTAGAT GCTTTATTTG TAAACTCTCA ATATGATCAA TTACAAGCGG ATACGAATAT 3300 TGCCATGATT CATGCGGCAG ATAAACGTGT TCATAGCATT CGAGAAGCTT ATCTGCCTGA GCTGTCTGTG ATTCCGGGTG TCAATGCGGC TATTTTTGAA 3400 GAATTAGAAG GGCGTATTTT CACTGCATTC TCCCTATATG ATGCGAGAAA TGTCATTAAA AATGGTGATT TTAATAATGG CTTATCCTGC TGGAACGTGA 3500 AAGGGCATGT AGATGTAGAA GAACAAAACA ACCAACGTTC GGTCCTTGTT CTTCCGGAAT GGGAAGCAGA AGTGTCACAA GAAGTTCGTG TCTGTCCGGG 3600 TCGTGGCTAT ATCCTTCGTG TCACAGCGTA CAAGGAGGGA TATGGAGAAG GTTGCGTAAC CATTCATGAG ATCGAGAACA ATACAGACGA ACTGAAGTTT 3700 AGCAACTGCG TAGAAGAGGA AATCTATCCA AATAACACGG TAACGTGTAA TGATTATACT GTAAATCAAG AAGAATACGG AGGTGCGTAC ACTTCTCGTA 3800 ATCGAGGATA TAACGAAGCT CCTTCCGTAC CAGCTGATTA TGCGTCAGTC TATGAAGAAA AATCGTATAC AGATGGACGA AGAGAGAATC CTTGTGAATT 3900 TAACAGAGGG TATAGGGATT ACACGCCACT ACCAGTTGGT TATGTGACAA AAGAATTAGA ATACTTCCCA GAAACCGATA AGGTATGGAT TGAGATTGGA 4000 GAAACGGAAG GAACATTTAT CGTGGACAGC GTGGAATTAC TCCTTATGGA GGAA (end HD-1)

FIG. 11B

Seriarro 1900 S. O.G. FIG. 6/16
Filing Date: Dec. 2488001 SUBCLASS
Applicants: Edwards et al.

OCT 0 7 2002

IPYNCLSNPE MDN Ν PNI Ν E C VEVLGGERIE G L T OFLL E F Т Y Т P I D Ι SL S S V P GAGF VΙ D Ι Ι W G Ι F G Ρ S QWDAFLVQ Ι Ε Ι Q L NORI QAI S RLEGLSNLY 0 Y Ι Α S F RΕ WE Ρ Α LR Ε Ε M RIQFNDMN S Α L T TA I Ρ L F PL S V Y VQAANLH L S V L R D V S V F DAAT S RYND TRLI GNYT G F ΙN L D Y V GLERV W Ρ D S Y N G R D W V R O F R R Ε L T Y D Ι V A L F P N S RRY P Ι R \mathbf{T} V S QLT R Ε P RGS S V L Ε Ν F D G S F A Q G I Ε G IRSP H LD Т K GE YYWSGH QIMAS D A Η Р V G F T M F L Y G GNAAP QQRIVAQL G Q G V Y Т Y R R Ρ F ΝI G Ι NNQQL SVLD G T Ε F S S LΡ Y RKS G Т V D S L N SAV DE I Ρ ΡQ Ν Ν R 0 S S H V S Μ F R S G F S N S S G F ΗR L V S Ι Ι Ρ F S W O H R S Α Ė F N Ν Ι I Ρ S S Q I Τ Q Ι Ρ L \mathbf{T} VKG T G S G Т S V ΡG G G D Ι L R R Τ S Ν F Ρ G 0 Ι QRYRV LRV Ν I TAPL S R Ι R Y Α S T Т N L S G I N QGNF Α T Μ S S G S Ν L 0 S G S F F S F S N G S V F T L S АН V F Ν S G V Ι Ε V P Α Ε V Τ F Ε Α E Y DLERA 0 KAV Ε L F Ν T Y H I IGLK \mathbf{T} D D D Q V S NLVE C V L S D Ε EKQEL S EKV KHAKRL S D ERNL L D Ρ F R D T NRQLDRG W G S T Ι ΙQ GG D D V F K Ε Y C Y P GTFD Ε Τ Y L Y QKID ESKLK T ΑY G YIEDSQDL Ε Ι ΥL IRYNAKHE Т V P Ν V L W PLSAQ S Ρ IGKCGE P N R C Α P Η L CRDGEKCAHHSHHF L D C S S L D Ι D V G T C FKIKTQDGHAR Ι V \mathbf{L} G Ν L Ε ΚR Ε ALA R V AEKKWRD KRE K L Ε Ε T N W EAK Ε S V D A L F V N S Q Y D Q L Q Α D T Ν Ι Α AADKRVH S IREAYLPE V Ι Ρ L S G V Ν Α Α Ι F GRIF Т Α F S LYDARNV ΙK Ν G D F Ν N G L S N V KGHVD EEQNNQRS V L V Ρ E V L W Ε Ε V S Y TAYK G V C PG R G Ι LRV E Y G Ε G C T V Ι Η DE LKF S N CVE EEIY ₽ N Т NN Т V T C D EE YG GAYT SRNRGYNE Α Ρ S Ρ S V Α D Y Α Y T DG RRENPC EFNRG ΥR D Y Т Ρ V ΚE L E YFPETDKVWIEIGETEGTF ΙV ELLLMEE

FIG. 12

(SEQ. ID. NO. 8)